

P.O. Box 630 100 Douglas Ave. Yankton, SD 57078 USA Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709 Website: www.mtronpti.com

SPECIFICATION FOR SMT VCXO MtronPTI P/N M3905S001

I. GENERAL & ELECTRICAL REQUIREMENTS:

- 1. FREQUENCY OF OPERATION: 19.440000 MHz
- 2. FREQUENCY STABILITY OVER OPERATING TEMPERATURE: ± 50 ppm max.
- 3. OPERATING TEMPERATURE RANGE: -20°C to +70°C
- 4. OPERATING VOLTAGE: 3.3 V ± 5%
- 5. OPERATING CURRENT: 20 mA max.
- 6. OUTPUT TYPE: HCMOS/TTL Compatible
- 7. SYMMETRY: 45/55% ref. to 1/2 Vdd
- 8. RISE/FALL TIME: 5 nS max. ref. 10% to 90% Vdd
- 9. OUTPUT LOGIC LEVELS: V_{OL} = 10% Vdd max. V_{OH} = 90% Vdd min.
- 10. OUTPUT LOAD: 15 pF max.
- 11. TRISTATE FUNCTION (Pad 2): Logic "1", or floating, enables out. Logic "0" disables output.
- 12. PULLABILITY: ± 80 ppm min.
- 13. LINEARITY: 10% max. with positive monotonic slope.
- 14. CONTROL VOLTAGE (Pad 1): 0.3 V to 3.0 V
- 15. MODULATION BANDWIDTH (- 3 dB): 10 kHz min.
- 16. INPUT IMPEDANCE (Pad 1): 50 K min. at 10 kHz
- 17. START-UP TIME: 10 ms max.
- 18. PHASE JITTER: 1 ps RMS max. (12 kHz to 20 MHz)
- 19. PHASE NOISE (Typical): 10 Hz 70 dBc/Hz, 100 Hz –100 dBc/Hz, 1 kHz –132 dBc/Hz 10 kHz –140 dBc/Hz, 100 kHz –150 dBc/hz

II. ENVIRONMENTAL & MECHANICAL REQUIREMENTS:

- 1. SHOCK: MIL-STD-202, Method 213, Condition C.
- 2. VIBRATION: MIL-STD-202, Methods 201 & 204.
- 3. HERMETICITY: 1 X 10⁻⁸ atm cc/sec min.
- 4. STORAGE TEMPERATURE: -45°C to +95°C
- 5. SOLDERABILITY: Per EIAJ-STD-002
- 6. PACKAGE: 6-leaded ceramic substrate with nickel-plated J-leads. The J-leads are post stamping nickel plated with RoHS compliant whisker limiting plating. The plating shall consist of 200 to 200 µinches of matte 100% tin, over 50 to 100 µinches of nickel. The plating must cover the entire surface of the lead, and must be homogeneous on all leads.

III. MAXIMUM SOLDERING CONDITIONS:



Note: Exceeding these limits can damage the device.

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IV. DIMENSIONS & PINOUT:



V. DATA SHEET REVISION TABLE:

Date	Rev.	Author	Details of Revision
4/29/09	0	WNJ	Original release.
5/12/09	А	WNJ	Corrected Pullability, operating current, and substrate marking requirements.

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